



SEQUENCE LISTING

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<120> Computer Software for Automated Annotation of Biological
Sequences

<130> 018547-048820US

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<151> 2001-04-19

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<151> 2001-04-20

<160> 5

<170> PatentIn version 3.3

<210> 1

<211> 373

<212> PRT

<213> Artificial

<220>

<223> Figure GRAPAHIT1 sequence

<400> 1

Leu Leu Gln Asp Ser Leu Leu Arg Leu Lys Asp Tyr Arg Gln Cys Phe
1 5 10 15

Glu Cys Ser Asp Val Ala Leu Asn Glu Ala Val Gln Gln Met Val Asn
20 25 30

Ser Gly Glu Ala Ala Ala Lys Glu Glu Trp Val Ala Thr Val Thr Gln
35 40 45

Leu Leu Met Gly Ile Glu Gln Ala Leu Ser Ala Asp Ser Ser Gly Ser
50 55 60

Ile Leu Lys Val Ser Ser Ser Thr Thr Gly Leu Val Arg Leu Thr Asn
65 70 75 80

Asn Leu Ile Gln Val Ile Asp Cys Ser Met Ala Val Gln Glu Glu Ala
85 90 95

Lys Glu Pro His Val Ser Ser Val Leu Pro Trp Ile Ile Leu His Arg
100 105 110

Ile	Ile	Trp	Gln	Glu	Glu	Asp	Thr	Phe	His	Ser	Leu	Cys	His	Gln	Gln	115	120	125	
Gln	Leu	Gln	Asn	Pro	Ala	Glu	Glu	Gly	Met	Ser	Glu	Thr	Pro	Met	Leu	130	135	140	
Pro	Ser	Ser	Leu	Met	Leu	Leu	Asn	Thr	Ala	His	Glu	Tyr	Leu	Gly	Arg	145	150	155	160
Arg	Ser	Trp	Cys	Cys	Asn	Ser	Asp	Gly	Ala	Leu	Leu	Arg	Phe	Tyr	Val	165	170	175	
Arg	Val	Leu	Gln	Lys	Glu	Leu	Ala	Ala	Ser	Thr	Ser	Glu	Asp	Thr	His	180	185	190	
Pro	Tyr	Lys	Glu	Glu	Leu	Glu	Thr	Ala	Leu	Glu	Gln	Cys	Phe	Tyr	Cys	195	200	205	
Leu	Tyr	Ser	Phe	Pro	Ser	Lys	Lys	Ser	Lys	Ala	Arg	Tyr	Leu	Glu	Glu	210	215	220	
His	Ser	Ala	Gln	Gln	Val	Asp	Leu	Ile	Trp	Glu	Asp	Ala	Leu	Phe	Met	225	230	235	240
Phe	Glu	Tyr	Phe	Lys	Pro	Lys	Thr	Leu	Pro	Glu	Phe	Asp	Ser	Tyr	Lys	245	250	255	
Thr	Ser	Thr	Val	Ser	Ala	Asp	Leu	Ala	Asn	Leu	Leu	Lys	Arg	Ile	Ala	260	265	270	
Thr	Ile	Val	Pro	Arg	Thr	Glu	Arg	Pro	Ala	Leu	Ser	Leu	Asp	Lys	Val	275	280	285	
Ser	Ala	Tyr	Ile	Glu	Gly	Thr	Ser	Thr	Glu	Val	Pro	Cys	Leu	Pro	Glu	290	295	300	
Gly	Ala	Asp	Pro	Ser	Pro	Pro	Val	Val	Asn	Glu	Leu	Tyr	Tyr	Leu	Leu	305	310	315	320
Ala	Asp	Tyr	His	Phe	Lys	Asn	Lys	Glu	Gln	Ser	Lys	Ala	Ile	Lys	Phe	325	330	335	
Tyr	Met	His	Asp	Ile	Cys	Ile	Cys	Pro	Asn	Arg	Phe	Asp	Ser	Trp	Ala	340	345	350	

Gly Met Ala Leu Ala Arg Ala Ser Arg Ile Gln Asp Lys Leu Asn Ser
 355 360 365

Asn Glu Leu Lys Ser
 370

<210> 2
 <211> 178
 <212> PRT
 <213> Artificial

<220>
 <223> Figure lvhr sequence

<400> 2

Ser Val Gln Asp Leu Asn Asp Leu Leu Ser Asp Gly Ser Gly Cys Tyr
 1 5 10 15

Ser Leu Pro Ser Gln Pro Cys Asn Glu Val Thr Pro Arg Ile Tyr Val
 20 25 30

Gly Asn Ala Ser Val Ala Gln Asp Ile Pro Lys Leu Gln Lys Leu Gly
 35 40 45

Ile Thr His Val Leu Asn Ala Ala Glu Gly Arg Ser Phe Met His Val
 50 55 60

Asn Thr Asn Ala Asn Phe Tyr Lys Asp Ser Gly Ile Thr Tyr Leu Gly
 65 70 75 80

Ile Lys Ala Asn Asp Thr Gln Glu Phe Asn Leu Ser Ala Tyr Phe Glu
 85 90 95

Arg Ala Ala Asp Phe Ile Asp Gln Ala Leu Ala Gln Lys Asn Gly Arg
 100 105 110

Val Leu Val His Cys Arg Glu Gly Tyr Ser Arg Ser Pro Thr Leu Val
 115 120 125

Ile Ala Tyr Leu Met Met Arg Gln Lys Met Asp Val Lys Ser Ala Leu
 130 135 140

Ser Ile Val Arg Gln Asn Arg Glu Ile Gly Pro Asn Asp Gly Phe Leu
 145 150 155 160

Ala Gln Leu Cys Gln Leu Asn Asp Arg Leu Ala Lys Glu Gly Lys Leu
 165 170 175

Lys Pro

<210> 3
<211> 159
<212> PRT
<213> Artificial

<220>
<223> Figure 1a17 sequence

<400> 3

Pro Pro Ala Asp Gly Ala Leu Lys Arg Ala Glu Glu Leu Lys Thr Gln
1 5 10 15

Ala Asn Asp Tyr Phe Lys Ala Lys Asp Tyr Glu Asn Ala Ile Lys Phe
20 25 30

Tyr Ser Gln Ala Ile Glu Leu Asn Pro Ser Asn Ala Ile Tyr Tyr Gly
35 40 45

Asn Arg Ser Leu Ala Tyr Leu Arg Thr Glu Cys Tyr Gly Tyr Ala Leu
50 55 60

Gly Asp Ala Thr Arg Ala Ile Glu Leu Asp Lys Lys Tyr Ile Lys Gly
65 70 75 80

Tyr Tyr Arg Arg Ala Ala Ser Asn Met Ala Leu Gly Lys Phe Arg Ala
85 90 95

Ala Leu Arg Asp Tyr Glu Thr Val Val Lys Val Lys Pro His Asp Lys
100 105 110

Asp Ala Lys Met Lys Tyr Gln Glu Cys Asn Lys Ile Val Lys Gln Lys
115 120 125

Ala Phe Glu Arg Ala Ile Ala Gly Asp Glu His Lys Arg Ser Val Val
130 135 140

Asp Ser Leu Asp Ile Glu Ser Met Thr Ile Glu Asp Glu Tyr Ser
145 150 155

<210> 4
<211> 235
<212> PRT
<213> Artificial

<220>

<223> Figure GRAPAHIT2 sequence

<400> 4

Pro Leu Cys Lys Gln Ala Leu Glu Asp Leu Glu Lys Thr Ser Gly His
1 5 10 15

Asp His Pro Asp Val Ala Thr Met Leu Asn Ile Leu Ala Leu Val Tyr
20 25 30

Arg Asp Gln Asn Lys Tyr Lys Glu Ala Ala His Leu Leu Asn Asp Ala
35 40 45

Leu Ala Ile Arg Glu Lys Thr Leu Gly Lys Asp His Pro Ala Val Ala
50 55 60

Ala Thr Leu Asn Asn Leu Ala Val Leu Tyr Gly Lys Arg Gly Lys Tyr
65 70 75 80

Lys Glu Ala Glu Pro Leu Cys Lys Arg Ala Leu Glu Ile Arg Glu Lys
85 90 95

Val Leu Gly Lys Phe His Pro Asp Val Ala Lys Gln Leu Ser Asn Leu
100 105 110

Ala Leu Leu Cys Gln Asn Gln Gly Lys Ala Glu Glu Val Glu Tyr Tyr
115 120 125

Tyr Arg Arg Ala Leu Glu Ile Tyr Ala Thr Arg Leu Gly Pro Asp Asp
130 135 140

Pro Asn Val Ala Lys Thr Lys Asn Asn Leu Ala Ser Cys Tyr Leu Lys
145 150 155 160

Gln Gly Lys Tyr Gln Asp Ala Glu Thr Leu Tyr Lys Glu Ile Leu Thr
165 170 175

Arg Ala His Glu Lys Glu Phe Gly Ser Val Asn Gly Asp Asn Lys Pro
180 185 190

Ile Trp Met His Ala Glu Glu Arg Glu Glu Ser Lys Asp Lys Arg Arg
195 200 205

Asp Ser Ala Pro Tyr Gly Glu Tyr Gly Ser Trp Tyr Lys Ala Cys Lys
210 215 220

Val Asp Ser Pro Thr Val Asn Thr Thr Leu Arg

225

230

235

<210> 5
 <211> 233
 <212> PRT
 <213> Artificial

<220>
 <223> Figure GRAPAHIT3 sequence

<400> 5

Lys Asp Trp Lys Gly Ala Leu Asp Ala Phe Ser Ala Val Gln Asp Pro
 1 5 10 15

His Ser Arg Ile Cys Phe Asn Ile Gly Cys Met Tyr Thr Ile Leu Lys
 20 25 30

Asn Met Thr Glu Ala Glu Lys Ala Phe Thr Arg Ser Ile Asn Arg Asp
 35 40 45

Lys His Leu Ala Val Ala Tyr Phe Gln Arg Gly Met Leu Tyr Tyr Gln
 50 55 60

Thr Glu Lys Tyr Asp Leu Ala Ile Lys Asp Leu Lys Glu Ala Leu Ile
 65 70 75 80

Gln Leu Arg Gly Asn Gln Leu Ile Asp Tyr Lys Ile Leu Gly Leu Gln
 85 90 95

Phe Lys Leu Phe Ala Cys Glu Val Leu Tyr Asn Ile Ala Phe Met Tyr
 100 105 110

Ala Lys Lys Glu Glu Trp Lys Lys Ala Glu Glu Gln Leu Ala Leu Ala
 115 120 125

Thr Ser Met Lys Ser Glu Pro Arg His Ser Lys Ile Asp Lys Ala Met
 130 135 140

Glu Cys Val Trp Lys Gln Lys Leu Tyr Glu Pro Val Val Ile Pro Val
 145 150 155 160

Gly Lys Leu Phe Arg Pro Asn Glu Arg Gln Val Ala Gln Leu Ala Lys
 165 170 175

Lys Asp Tyr Leu Gly Lys Ala Thr Val Val Ala Ser Val Val Asp Gln
 180 185 190

Asp Ser Phe Ser Gly Phe Ala Pro Leu Gln Pro Gln Ala Ala Glu Pro
195 200 205

Pro Pro Arg Pro Lys Thr Pro Glu Ile Phe Arg Ala Leu Glu Gly Glu
210 215 220

Ala His Arg Val Leu Phe Gly Phe Val
225 230